A Comparative Study on the Images of Libraries for Library Users and Library and Information Science Experts: Using PAC Analysis

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Abstract: People have various images of libraries. However, previous studies have not focused on differences in the images of libraries owned by library users and experts in library and information science. Therefore, this study seeks to compare the image of the library as beheld by library users and experts in library and information science, and to examine the difference. The participants are one professor of library and information science in their 50s and three university students in their 20s. For this study, we conducted a survey using Personal Attitude Construct (PAC) analysis (Naito 2002) that combines qualitative research and cluster analysis. There are four procedures: 1. Free association from associative stimulus sentence, 2. Comparison of similarity rating between associative words, 3. Cluster analysis by dissimilarity distance matrix, 4. Semi-structured interview using a tree diagram. Thus, both students and the expert introduced keywords relating to the space of the library. In addition, the expert perceived the library from the library management side, whereas the students had a user-centered perception.

Keywords: Library and information science, PAC Analysis, Image of Library, Users mind, Experts mind, Library use

1. Introduction: Differences in thinking between users and experts

People using the library are limited to a part of the whole, and many people do not feel the necessity of or interested in using libraries in Japan. According to a questionnaire survey by the National Diet Library (2015), 60.4% of respondents had not used public libraries or mobile libraries within the last year. Furthermore, about 36% of them answered "I don't feel the need to go to the library/I'm not interested." Nevertheless, at the stage of examining how libraries

Received: 31.7.2017 Accepted: 21.11.2017 ISSN 2241-1925

should actually be, Shoji and Kojima (2012) said that library's guidelines are set by the opinions of experts involved in libraries, and a gap has been pointed out in the recognition from libraries' users. Shoji and Kojima (2012) had eight experts (university professors in charge of librarian courses), 100 ordinary people (people who often use libraries), and 121 students as middle layers (students taking courses related to librarians); they showed that experts did not emphasize libraries "casualness" or "comfort" compared to other participants. In addition, there was a reference in the middle layers to the "image of the library/ambience," particularly the "casualness" that was required for the younger generation in their twenties. However, there is no vocabulary related to images in experts' descriptions and they have been unable to investigate the difference between the image of the library held by experts and that held by others.

In this research, we first grasp the library image of library experts and compare it with that of general library users. This aims to clarify the aspect where the images of general users and experts deviate from the library's actual circumstance. Furthermore, we will use the personal association of freedom to discover impressions about libraries from different viewpoints from Shoji and Kojima (2012).

Shoji and Kojima (2012) pointed out that the middle layer of "young people around the age of 20" who are highly involved in the library and have a high intellectual level, who it is reasonable to consider general users has been investigated. Therefore, this research considers and investigates students who are studying librarian-related courses equivalent to middle-class as general users.

2. Method: Personal Attitude Construct analysis

This study uses Personal Attitude Construct (PAC) analysis as devised by Naito (2002). In the image survey of libraries of Hasegawa (2015) and Shoji and Kojima (2012), the SD method and questionnaire surveys are typical. However, in the case of a questionnaire with preliminary choices, it becomes an option according to the researcher's interests. In contrast, in the case of PAC analysis, it is possible for individuals to freely use words and sentences, and it is therefore easy to capture personality in comparison with others (Naito 2002). This research will use PAC analysis to discover differences between the images that library experts and general library users have, and views on libraries that Shoji and Kojima (2012) could not discover.

The participants are one expert in library and information science (man in his 50s) and three university students (one woman and two men in their 20s).
The procedure was as follows: The time required for the survey per person ranged from 1 hour to 1 hour and 40 minutes.

1. Presented a consent form to survey participants to use and record the outline of the research and purpose data, with the explanation that it is possible to stop the investigation at any time and obtain consent.
2. Prepare the paper that says associative stimulus sentences to survey participants, reading aloud, and checking the content.
   The associative stimulus sentences are as follows.
   "What image do you have of the library? Please answer in words or sentences the image that comes to mind based on your experience."
3. The participants were to do free association based on associative stimulus sentences. The implementer entered the associative items that the participants described verbally into PAC-Assist2 (Tsuchida 2017) and I asked the survey participants to confirm the entered association item.
4. Next, I asked PAC-Assist 2 to input a positive (+), negative (-), or neutral (0) image for associative items. Finally, compared with the entire association item, we asked the importance degree to enter numbers from the top.
5. Assessment among association items was carried out using PAC-Assist2 (Tsuchida 2017) (Fig. 1) in which 10 scales were given, but numerical processing was divided into 1,000 stages. The evaluation result was output as a dissimilarity matrix. During the evaluation, survey participants operated the system directly.

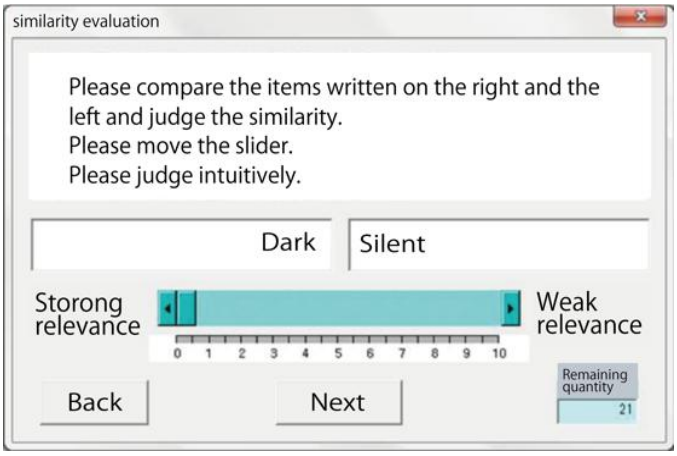

Figure 1 Similarity evaluation window of PAC-Assist2

6. Cluster analysis was carried out using R (Ihaka Gentleman 1996) to create dendrograms and Ward's method was used for cluster analysis.
7. We conducted semi-structured interviews based on the created dendrogram and we prepared two copies of the dendrogram for the interview between

survey cooperators and investigators. Before interviewing about the dendrogram, an interview was conducted after asking the interviewees easy-to-answer introductory questions such as "have you gone to the library recently?" In the interview, the implementer first separated the participants' dendrogram clusters into groups. Then, we asked for an interpretation of the content in each cluster. Next, we compared each cluster and asked to them to identify differences in each. Finally, we took up some items individually and asked supplementary questions.

3. Results: Dendrogram and speech

Fig. 2 is the dendrogram of the expert (male, 50s). We summarized the cluster-by-cluster report below and the cluster comparison utterance.

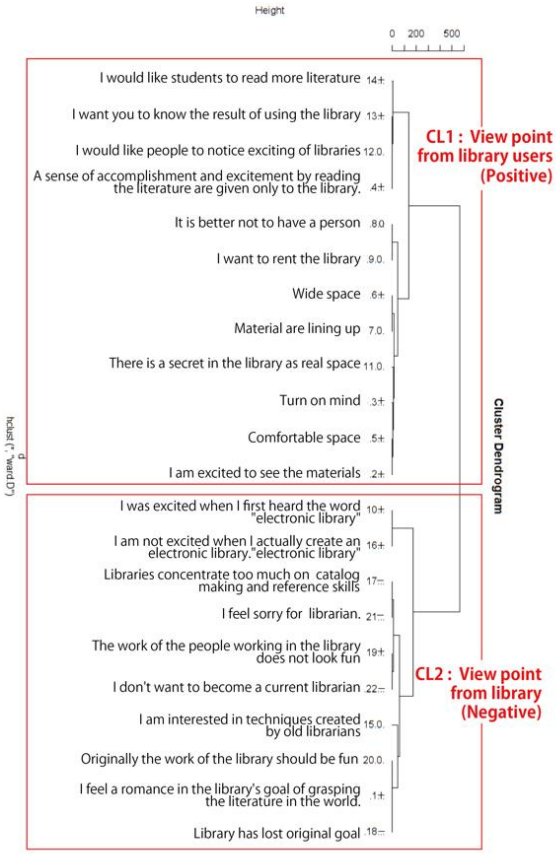

Figure 2. Dendrogram of the expert

CL 1: "User Perspective (Positive)"
It's so me. I don't place much emphasis on people's relationships. I like places without people. Communication is an important function of libraries, but I place importance on the comfort of space and the interaction with materials.

CL 2: "Library viewpoint (negative)"
There are no items about the mechanisms of the library at the cluster; there is an ideal library and gaps. I am not excited when I see the reality.

Comparison of CL1 and CL2:
The upper cluster is the user viewpoint, the lower cluster is the library perspective I can understand. The upper is positive and the lower is negative. The top half talks about the table of the library.

Fig. 3 is the dendrogram of Student 1 (male, 20s). We have summarized the cluster-by-cluster report below and the cluster comparison utterance.
CL1: "Library functions and services (personal use)"
It is where we read books I am looking for from the original, say to search for that book, or to go here and read or rent. Whether my interest is decided or not, I can find a book and a consultation.
CL 2: "Library space (group use)"
I think that this is mainly due to the functions of libraries that are not related to book loans. I think that those who do not buy newspapers are reading them in the upper cluster of the library.
Comparison of CL1 and CL2
The above cluster has functions related to libraries and others. The lower cluster is library spaces and meeting places, people with a purpose of using the space in the library.

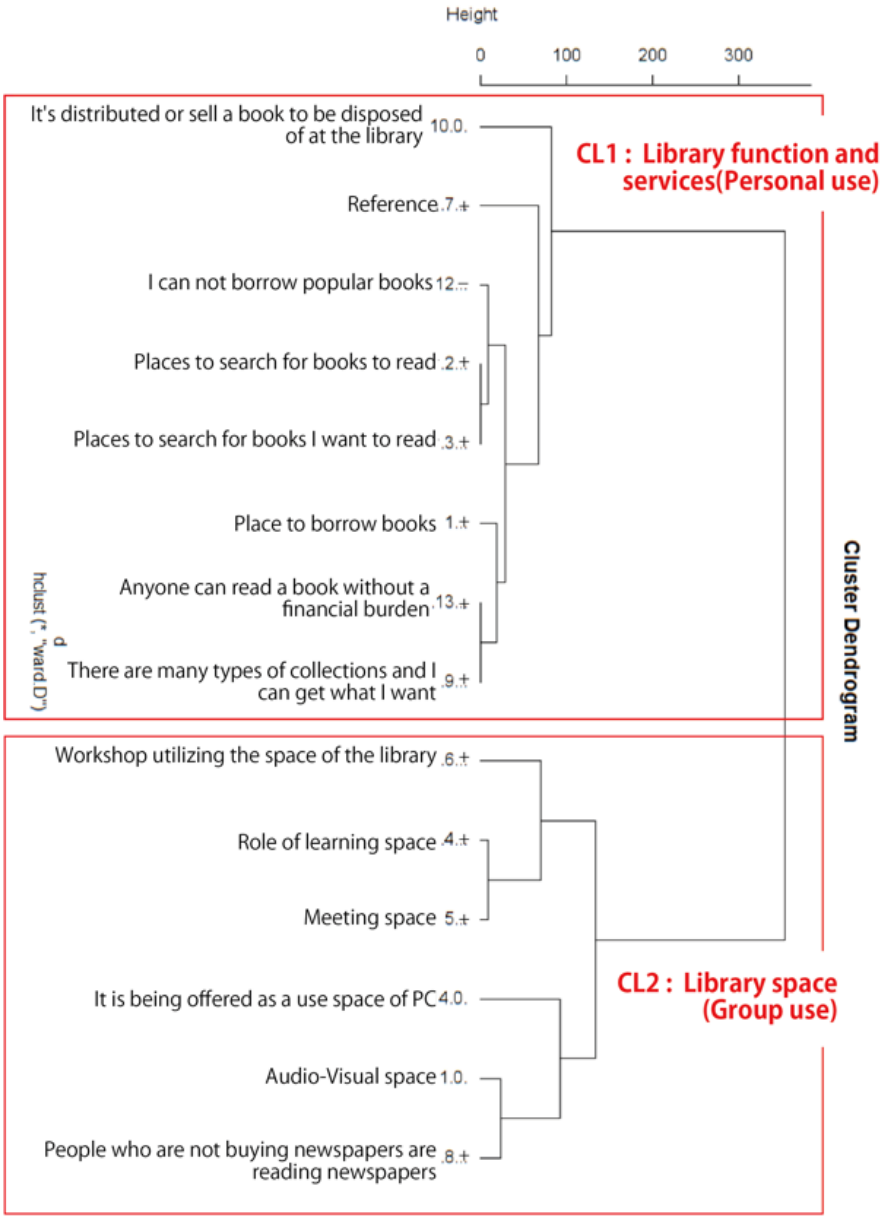

Figure 3. Student's dendrogram 1

Fig. 4 is the dendrogram of Student 2 (female, 20s). Below we have summarized the cluster-by-cluster report and the cluster comparison utterance.
CL1: "Image of public library"
Buildings are not that important, but I have images that are difficult to enter. Although not exclusively, there is no atmosphere of gathering new users.
CL2: "Experience at the school library"
Many items come from my experience; I did not play outside as a child. The library is more comfortable than staying in the classroom during vacation time; it is free and easy to enter.
CL3: "Experience at the public library"
I often went there with my parents. There were times when I chose books from the advice of others: librarians, book lists, and library corners.

Comparison of CL1 and CL2
Assignment and others, the upper is about public libraries, the lower is about school libraries. There is a sense that the school library is closer to them as a user and it is completed in the hall.
Comparison of CL2 and CL3
I feel different freedoms when choosing books.
I can read young adult books at junior high school behind my parents' backs. When going to the public library, my parents told me that I should read literary masterpieces.
Comparison of CL1 and CL3
I see families with small children borrowing picture books anywhere. I have the impression that the library does not publicize. Corporate seminars are also held, but this is not known.

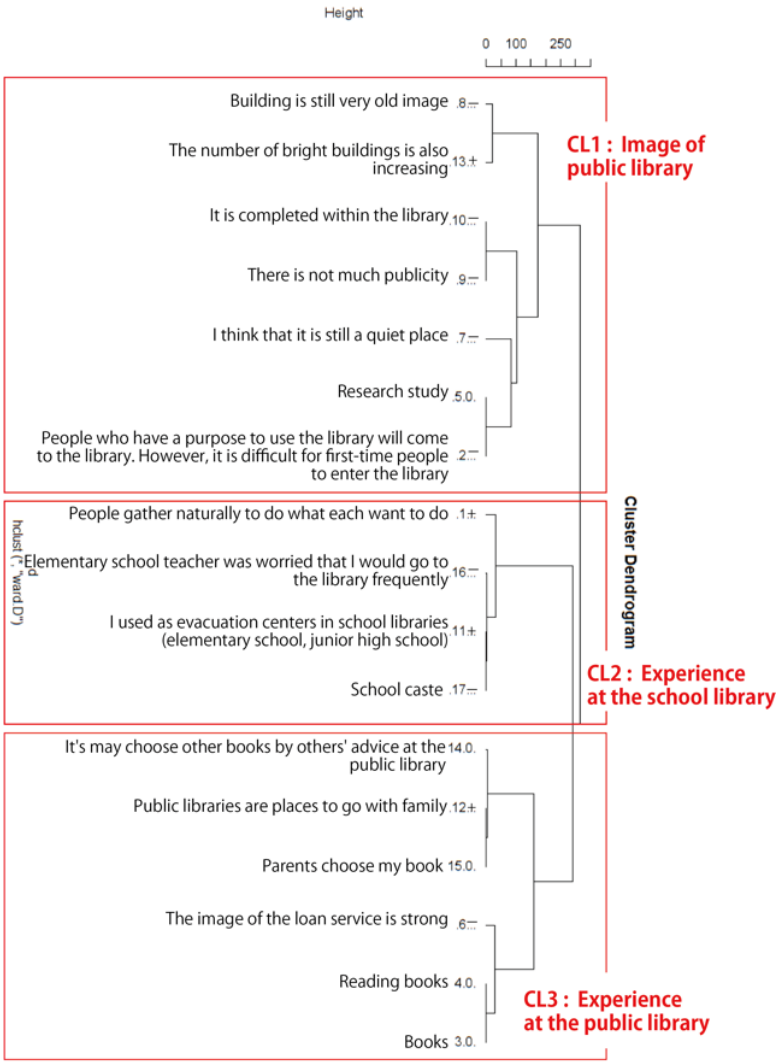

Figure 4. Student's dendrogram 2

Fig. 5 is the dendrogram of Student 3 (male, 20s). Below we have summarized the cluster-by-cluster report and the cluster comparison utterance.
CL 1: "Entertainment, hobby, interest"
The upper cluster is a library view of people who like books. Unlike places, it seems that they are active with the characteristics of the library.
CL 2: "The sense of obligation in the library"

It is reasonable that high school libraries and university libraries are places of study; because I am an information science major, the meaning of study is included in PC.

Comparison of CL1 and CL2
CL1 includes images that it is a stronger hobby and interest than studying.
CL2 shows that they must also firmly study and be forced to do some task. There is a difference in the obligation feeling "Study" since I think that studying should be done.

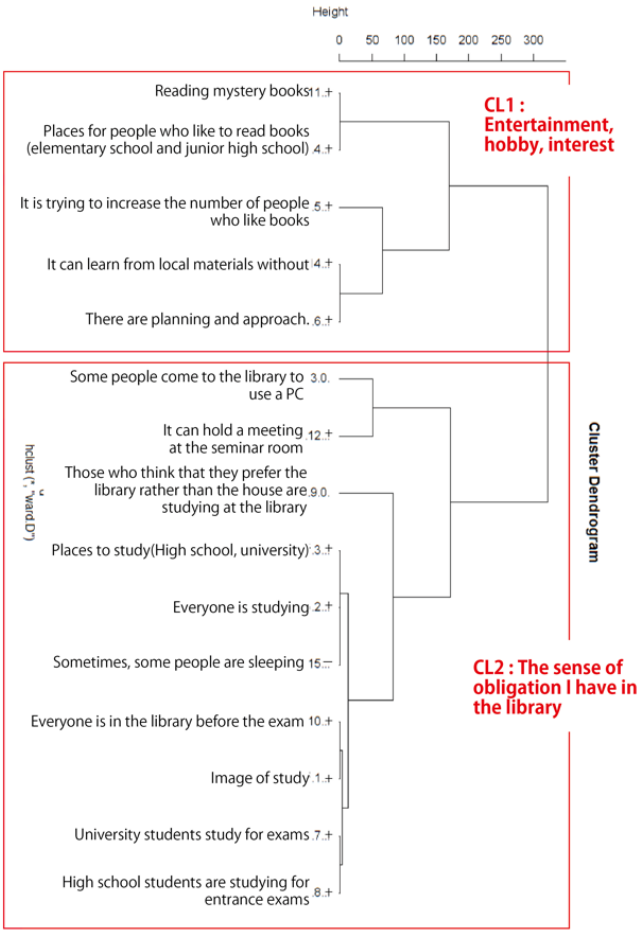

Figure 5 Student's dendrogram 3

4. Discussion

In the survey results, all participants commonly pointed out associative words that were related to the space of the library, and it turns out that they were

conscious about the library spaces. Despite the different use experiences, they had a positive image as a freely usable space, as indicated in the remarks that "I like places without people," "Library has learning space and freely available space," "I used school libraries as an evacuation place," and "Everyone is studying. The space has a relaxed atmosphere". This revealed that the space is considered an important element in the library.

Although Student 2 and the expert liked the space itself as a library, they both stated that there is no good impression in current Japanese libraries and that library should be improved. Student 2 raised the image from the user experience that CL2: "Experience at the school library" and CL3: "Experience at the public library". Similarly, according to the interview, Students 1 and 3 have viewpoint of user experience. On the other hand, the expert raised the image from CL2: "View point from library (Negative)"; this image focuses on the work at the library.

This shows that the expert had images of the library from the viewpoint of the management side and students had them from the user perspective. Additionally, we found that expert has a negative image of library management from "I do not presently want to become a librarian, the work at the library is fun in itself."

Furthermore, in the study of Shoji and Kojima (2012), the expert gave results that did not emphasize living comfort. However, the expert in this survey mentioned "residentiality" as shown in the following: "I want to rent the library," "it is better not to have a person". They said in an interview that "I think it was better to add detail meaning of comfortable space," and it looks like that the comfort of the space is consciously encouraged.

5. Conclusions

This survey found differences in the images of libraries as held by an expert and university students, such as whether they are on the management or user side. Furthermore, unlike the results of Shoji and Kojima (2012), experts also saw the emphasis on comfort in the library.

A future task would be to consider how these goals set up in the library based on differences of opinions between experts and general users.

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